

# **2012 Immunization Schedules for Children 0 Through 18 Years of Age**

**Cody Meissner, Chair**  
**Iyabode (Yabo) Beysolow, CDC lead**

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# Harmonized Schedule Work Group 2011

- Cody Meissner (ACIP, Chair)
- Susan Lett
- Kris Ehresmann (ACIP)
- Renee Jenkins (ACIP)
- Lorry Rubin (AAP)
- Douglas Campos-Outcalt (AAFP) - outgoing
- Everett Schlam (AAFP) - incoming
- Patsy Stinchfield (NAPNAP)
- Rosemary Spense (AIM)
- Katie Brewer (ANA)
- Chris Barry (AAPA)
- Amy Middleman (SAHM)
- Diane Peterson (IAC)
- Yabo Akinsanya-Beyssolow (CDC Lead)
- Andrew Kroger (CDC)
- William Atkinson (CDC)

# 2012 Schedules

- Basic layout of the schedules is unchanged
- Three schedules
  - 0 through 6 years
  - 7 through 18 years
  - “Catch-up”
    - 4 months through 6 years
    - 7 through 18 years
- Each schedule has separate footnotes

# General Approach to the 2012 0 Through 18 Year Schedules

- Edits to the 2011 schedule made by *MMWR* were incorporated into the first draft of the 2012 schedules
- Numerous wording changes in all three schedules to improve clarity and readability, and to reduce the number of words
- Redundant footnote text removed (i.e., information presented in grid was removed from footnote)

# Proposed Changes to Recommended Immunization Schedule for Persons Aged 0 Through 6 years

## Recommended Immunization Schedule for Persons Aged 0 Through 6 Years—United States • 2012

For those who fall behind or start late, see the catch-up schedule

Vaccine ▼	Age ►	Birth	1 month	2 months	4 months	6 months	9 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B <sup>1</sup>		HepB	HepB					HepB					
Rotavirus <sup>2</sup>				RV	RV	RV <sup>2</sup>							
Diphtheria, Tetanus, Pertussis <sup>3</sup>				DTaP	DTaP	DTaP	see footnote <sup>3</sup>		DTaP				DTaP
<i>Haemophilus influenzae</i> type b <sup>4</sup>				Hib	Hib	Hib <sup>4</sup>		Hib					
Pneumococcal <sup>5</sup>				PCV	PCV	PCV		PCV				PPSV	
Inactivated Poliovirus <sup>6</sup>				IPV	IPV			IPV					IPV
Influenza <sup>7</sup>								Influenza (Yearly)					
Measles, Mumps, Rubella <sup>8</sup>								MMR		see footnote <sup>8</sup>			MMR
Varicella <sup>9</sup>								Varicella		see footnote <sup>9</sup>			Varicella
Hepatitis A <sup>10</sup>								HepA					HepA
Meningococcal <sup>11</sup>								MCV4 — see footnote <sup>11</sup>					

Range of recommended ages for all children

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of February 11, 2011. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

### 1. Hepatitis B vaccine (HepB). (Minimum age: birth)

#### At birth:

- Administer monovalent HepB to all newborns before hospital discharge.
- For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg 1 to 2 months after receiving the last dose of the series.
- If mother's HBsAg status is unknown, within 12 hours of birth administer HepB for infants weighing  $\geq 2000$  grams and Hep B plus HBIG for infants weighing  $< 2000$  grams. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG for infants weighing  $\geq 2000$  grams (no later than age 1 week).

#### Doses following the birth dose:

### 6. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

- If 4 or more doses are administered prior to age 4 years an additional dose should be administered at age 4 through 6 years.
- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.

### 7. Influenza vaccine. (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

- For most healthy children aged 2 years and older, either LAIV or TIV may be used. However LAIV should NOT be given to some children, including children with asthma; or children 2 through 4 years who had wheezing in the past 12 months; or children who have any underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV please see MMWR 2010;59(No. RR-8).

# 2012 Schedule – 0 Through 6 Years

## Hepatitis B Footnote (footnote 1)

### 1. Hepatitis B vaccine (HepB). (Minimum age: birth)

#### At birth:

- Administer monovalent HepB to all newborns before hospital discharge.
- **For infants born to** ~~If mother is~~ hepatitis B surface antigen (HBsAg)-positive **mothers**, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. **These infants should be tested for HBsAg and antibody to HbsAg 1 to 2 months after receiving the last dose of the series.**
- If mother's HBsAg status is unknown, **within 12 hours of birth** administer HepB **for infants weighing ≥ 2000 grams and HepB plus HBIG for infants weighing < 2000 grams.** Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG **for infants weighing ≥ 2000 grams** (no later than age 1 week).

#### Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB should be used for doses administered before age 6 weeks.
- ~~• Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).~~
- Administration of 4 doses of HepB ~~to infants~~ is permissible when a combination vaccine containing HepB is administered after the birth dose. ~~Infants who did not receive a birth dose should receive 3 doses of HepB on a schedule of 0, 1, and 6 months.~~
- ~~• The final (3rd or 4th) dose in the HepB series should be administered no earlier than age 24 weeks.~~
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine **starting as soon as feasible(See Table).**
- **The minimum interval between dose 1 and dose 2 is 4 weeks; between dose 2 and 3 is 8 weeks. The final (3<sup>rd</sup> or 4<sup>th</sup>) dose in the HepB series should be administered no earlier than age 24 weeks, and at least 16 weeks after the 1<sup>st</sup> dose.**

# 2012 Schedule – 0 Through 6 Years

## Hepatitis B Footnote (footnote 1)

- Consolidated footnote:
  - For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg 1 to 2 months after receiving the last dose of the series.

# 2012 Schedule – 0 Through 6 Years

## Hepatitis B Footnote (footnote 1)

- New footnotes:
  - If mother's HBsAg status is unknown, within 12 hours of birth administer HepB for infants weighing  $\geq 2000$  grams and Hep B plus HBIG for infants weighing  $< 2000$  grams. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG for infants weighing  $\geq 2000$  grams (no later than age 1 week).



# **2012 Schedule – 0 Through 6 Years**

## **Hepatitis B Footnote (footnote 1)**

- **New footnotes:**
  - **Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine starting as soon as feasible. (See Table).**
  - **The minimum interval between dose 1 and dose 2 is 4 weeks; between dose 2 and 3 is 8 weeks. The final (3<sup>rd</sup> or 4<sup>th</sup>) dose in the HepB series should be administered no earlier than age 24 weeks, and at least 16 weeks after the 1<sup>st</sup> dose.**

# 2012 Schedule – 0 Through 6 Years

## Pneumococcal Vaccines Footnote (footnote 5)

**5. Pneumococcal vaccine.** (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])

• ~~PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.~~

~~A PCV series begun with 7-valent PCV (PCV7) should be completed with 13-valent PCV (PCV13).~~

~~• A single supplemental dose of PCV13 is recommended for all children aged 14 through 59 months who have received an age-appropriate series of PCV7.~~

~~• A single supplemental dose of PCV13 is recommended for all children aged 60 through 71 months with underlying medical conditions who have received an age-appropriate series of PCV7.~~

• For children who have received an age-appropriate series of PCV7, a single supplemental dose of PCV13 is recommended for: 1. ALL children aged 14 through 59 months 2. Children aged 60 through 71 months with underlying medical conditions.

~~• The supplemental dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7.~~

• Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant.

• See MMWR 2010:59(No. RR-11).

# **2012 Schedule – 0 Through 6 Years**

## **Pneumococcal Vaccines Footnote (footnote 5)**

### **Consolidated footnotes:**

- Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.**
- For children who have received an age-appropriate series of PCV7, a single supplemental dose of PCV13 is recommended for: 1. ALL children aged 14 through 59 months 2. Children aged 60 through 71 months with underlying medical conditions.**
- Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant.**
- See MMWR 2010:59(No. RR-11).**

# 2012 Schedule – 0 Through 6 Years

## Influenza Footnote (footnote 7)

**7. Influenza vaccine.** (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

• For **most** healthy children aged 2 years and older, ~~(i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used~~, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months. **However LAIV should NOT be given to some children, including children with asthma; or children 2 through 4 years who had wheezing in the past 12 months; or children who have any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV please see MMWR 2010; 59(No. RR-8)**

~~• Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.~~

~~• Children aged 6 months through 8 years who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010–2011 seasonal influenza vaccine. See MMWR 2010; 59(No. RR-8):33–34.~~

**• For children aged 6 months through 8 years:**

**1.) For the 2011-12 season, administer 2 doses (separated by at least 4 weeks) to (a) those who are receiving influenza vaccine for the first time or (b) to those who did not receive at least 1 dose of the 2010-11 vaccine.**

**2.) For the 2012-13 season, follow dosing guidelines in the 2012 ACIP Influenza vaccine recommendations.**

# **2012 Schedule – 0 Through 6 Years**

## **Influenza Footnote (footnote 7)**

- **New footnotes:**
  - **For most healthy children aged 2 years and older, either LAIV or TIV may be used. However LAIV should NOT be given to some children, including children with asthma; or children 2 through 4 years who had wheezing in the past 12 months; or children who have any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV please see MMWR 2010;59(No. RR-8).**

# 2012 Schedule – 0 Through 6 Years

## Influenza Footnote (footnote 7)

- **New footnotes:**
  - **For children aged 6 months through 8 years:**
    - 1.) **For the 2011-12 season, administer 2 doses (separated by at least 4 weeks) to (a) those who are receiving influenza vaccine for the first time or (b) to those who did not receive at least 1 dose of the 2010-11 vaccine.**
    - 2.) **For the 2012-13 season, follow dosing guidelines in the 2012 ACIP Influenza vaccine recommendations.**

# 2012 Schedule – 0 Through 6 Years

## MMR Footnote (footnote 8)

### 8. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)

- The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
- Administer MMR vaccine to infants aged 6 through 11 months who are traveling internationally. This dose should be repeated at 12 months or older and at least 4 weeks after the previous dose. These infants should also receive a third dose at age 4 through 6 years.

## **2012 Schedule – 0 Through 6 Years MMR Footnote (footnote 8)**

- **New bullet added:**
  - **The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.**
  - **Administer MMR vaccine to infants aged 6 through 11 months who are traveling internationally. This dose should be repeated at 12 months or older and at least 4 weeks after the previous dose. These children should also receive a third dose at age 4 through 6 years.**



# 2012 Schedule – 0 Through 6 Years

## HepA Footnote (footnote 10)

### 10. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- ~~Administer 2 doses at least 6 months apart.~~ Administer 2 doses 6 to 18 months apart.
- HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

# 2012 Schedule – 0 Through 6 Years

## MCV4 Footnote (footnote 11)

11. ~~Meningococcal conjugate vaccine, quadrivalent (MCV4).~~ (Minimum age: ~~2 years~~).

- ~~• Administer 2 doses of MCV4 at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.~~
- ~~• Persons with human immunodeficiency virus (HIV) infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.~~
- ~~• Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.~~
- ~~• Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years if the first dose was administered at age 2 through 6 years.~~

**Meningococcal conjugate vaccines, quadrivalent (MCV4).** Minimum age 9 months for Menactra (MCV4-D), 2 years for Menveo (MCV4-CRM).

- For children ages 9 through 23 months with persistent complement component-deficiency, residents of or travelers to countries with hyperendemic or epidemic disease and to children present during outbreaks caused by a vaccine serogroup, administer 2 doses of MCV-D ideally at 9 months and 12 months old or at least 8 weeks apart.
- For children 24 months and older with persistent complement component deficiency who have not been previously vaccinated or with anatomic/functional asplenia, administer 2 doses of either MCV4 at least 8 weeks apart, and 1 dose every 5 years thereafter. Administer MCV-D at least 4 weeks after completion of all PCV doses in persons with asplenia.
- See MMWR 2011;60(03);72-76 and VFC Resolution No.6/11-1 and MMWR 2011; 60(40);1391-1392 for further guidance.

# 2012 Schedule – 0 Through 6 Years

## MCV4 Footnote (footnote 11)

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- **New Heading:**

**Meningococcal conjugate vaccines, quadrivalent (MCV4). Minimum age 9 months for Menactra (MCV4-D), 2 years for Menveo (MCV4-CRM).**

# 2012 Schedule – 0 Through 6 Years

## MCV4 Footnote (footnote 11)

- New footnotes:
  - For children ages 9 through 23 months with persistent complement component deficiency, residents of or travelers to countries with hyperendemic or epidemic disease and children present during outbreaks caused by a vaccine serogroup, administer 2 primary doses of MCV4-D ideally at 9 months and 12 months old or at least 8 weeks apart.

# 2012 Schedule – 0 Through 6 Years

## MCV4 Footnote (footnote 11)

- New footnotes:
  - For children 24 months and older with persistent complement component deficiency who have not been previously vaccinated or with anatomic/functional asplenia, administer 2 primary doses of either MCV4 at least 8 weeks apart, and 1 dose every 5 years thereafter.

## **2012 Schedule – 0 Through 6 Years**

### **MCV4 Footnote (footnote 11)**

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- For children with anatomic/functional asplenia, if MCV4-D (Menactra) is used, administer MCV4-D (Menactra) at a minimum age of 2 years old and at least 4 weeks after completion of all PCV doses.**
- See MMWR 2011;60(03);72-76 and VFC Resolution No.6/11-1 and MMWR 2011; 60(40);1391-1392 for further guidance.**

# Proposed Changes to Figure 2. Recommended Immunization Schedule for Persons Aged 7 Through 18 Years

## Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2012

For those who fall behind or start late, see the schedule below and the catch-up schedule

Vaccine ▼	Age ►	7–10 years	11–12 years	13–18 years	
Tetanus, Diphtheria, Pertussis <sup>1</sup>		1 Dose (if indicated)	1 Dose	1 Dose (if indicated)	
Human Papillomavirus <sup>2</sup>		See footnote <sup>2</sup>	3 Doses (females)	Complete 3-Dose Series	Range of recommended ages for all children
Meningococcal <sup>3</sup>		See footnote <sup>3</sup>	Dose 1	Booster at 16 years old	
Influenza <sup>4</sup>		1 Dose (yearly)			Range of recommended ages for catch-up immunization
Pneumococcal <sup>5</sup>		see footnote <sup>5</sup>			
Hepatitis A <sup>6</sup>		Complete 2-Dose Series			Range of recommended ages for certain high-risk groups
Hepatitis B <sup>7</sup>		Complete 3-Dose Series			
Inactivated Poliovirus <sup>8</sup>		Complete 3-Dose Series			
Measles, Mumps, Rubella <sup>9</sup>		Complete 2-Dose Series			
Varicella <sup>10</sup>		Complete 2-Dose Series			

This schedule includes recommendations in effect as of February 11, 2011. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

### 1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for Boostrix and 11 years for Adacel)

- Persons aged 11 through 18 years who have not received Tdap should receive a dose followed by Td booster doses every 10 years thereafter.
- Tdap should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid-containing vaccine are needed.
- Tdap can be administered regardless of the interval since the last

### • For children aged 6 months through 8 years:

- for the 2011–12 season, give 2 doses (separated by at least 4 weeks) to (a) those who are receiving influenza vaccine for the first time or (b) to those who did not receive at least 1 dose of the 2010–11 vaccine.
- for the 2012–13 season, follow dosing guidelines in the 2012 ACIP Influenza vaccine recommendations.

### 5. Pneumococcal vaccines.

- A single dose of PCV may be administered to children aged 6 through 18 years who have functional or anatomic asplenia, HIV infection or

# 2012 Schedule – 7 Through 18 Years HPV Footnote (footnote 2)

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- Awaiting ACIP vote in Oct 2011 before finalizing these footnotes.



# 2012 Schedule – 7 Through 18 Years

## HPV Footnote (footnote 2)

- 2. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)
  - Quadrivalent HPV vaccine (HPV4 Gardasil) or bivalent HPV vaccine (HPV2 Cervarix) is recommended for the prevention of cervical precancers and cancers in females.
  - **HPV4 Gardasil is recommended for prevention of cervical precancers and cancers in females; anal cancer and genital warts in both females and males.**
  - **Routine vaccination for females and males is recommended as a 3-dose series at 11 to 12 years of age. The series can be started beginning at 9 years of age.**
  - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).

# 2012 Schedule – 7 Through 18 Years

## MCV4 Footnote (footnote 3)

### 3. Meningococcal conjugate vaccine, quadrivalent (MCV4) .-(Minimum age: 2 years **9 mos** for Menactra (MCV4-D); 2 years for Menveo (MCV4-CRM))

- Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
- Administer 1 dose at age 13 through 18 years if not previously vaccinated.
- ~~Persons who received their first dose at age 13 through 15 years should receive a booster dose at age 16 through 18 years.~~
- **If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years with a minimum interval of at least 8 weeks from the preceding dose.**
- ~~Administer 1 dose to previously unvaccinated college freshmen living in a dormitory.~~
- ~~Administer 2 doses at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.~~
- ~~Persons with HIV infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.~~
- ~~Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.~~
- ~~Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older)~~
- **If the first dose is administered at 16 years or older, a booster dose is not needed.**
- **Administer 2 primary doses at least 8 weeks apart to previously unvaccinated persons with persistent complement component deficiency, or anatomic or functional asplenia, and 1 dose every 5 years thereafter.**
- **HIV positive adolescents aged 11 through 18 years should receive a 2 dose primary series of MCV4, at least 8 weeks apart.**

See MMWR 2011;60(03);72-76 and VFC Resolution No.6/11-1 for further guidelines.

## 2012 Schedule – 7 Through 18 Years MCV4 Footnote (footnote 3)

- 3. Meningococcal conjugate vaccines, quadrivalent (MCV4) . Minimum age: 2 years 9 months for Menactra (MCV4-D); 2 years for Menveo (MCV4-CRM)
  - Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
  - Administer 1 dose at age 13 through 18 years if not previously vaccinated.

# 2012 Schedule – 7 Through 18 Years

## MCV4 Footnote (footnote 3)

- New footnotes:
  - If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years **with a minimum interval of at least 8 weeks from the preceding dose.**
  - If the first dose is administered at 16 years or older, a booster dose is not needed.

# 2012 Schedule – 7 Through 18 Years

## MCV4 Footnote (footnote 3)

- **New footnotes:**
  - Administer 2 primary doses at least 8 weeks apart to previously unvaccinated persons with persistent complement component deficiency, or anatomic or functional asplenia, and 1 dose every 5 years thereafter.
  - HIV-positive adolescents aged 11 through 18 years should receive a 2 dose primary series of MCV4, at least 8 weeks apart.
  - See MMWR 2011;60(03);72-76 and VFC Resolution No.6/11-1 for further guidelines.

# 2012 Schedule – 7 Through 18 Years

## Influenza Footnote (footnote 4)

### 4. Influenza vaccine (seasonal).

- For **most** healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, **except LAIV should NOT be used for some persons, including those with asthma or any other underlying medical conditions that predisposes them to influenza complications. For all other contraindications to use of LAIV please see MMWR 2010;59(No. RR-8).**
- ~~Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.~~
- ~~Children 6 months through 8 years of age who received no doses of monovalent 2009 H1N1 vaccine should receive 2 doses of 2010-2011 seasonal influenza vaccine. See MMWR 2010;59(No. RR-8):33-34.~~
- **Administer 1 dose to persons 9 years and older.**
- **For children aged 6 months through 8 years:**
  - 1.) **for the 2011-12 season, give 2 doses (separated by at least 4 weeks) to (a) those who are receiving influenza vaccine for the first time or (b) to those who did not receive at least 1 dose of the 2010-11 vaccine.**
  - 2.) **for the 2012-13 season, follow dosing guidelines in the 2012 ACIP Influenza vaccine recommendations.**

# 2012 Schedule – 7 Through 18 Years

## Influenza Footnote (footnote 4)

- **New footnotes:**
  - For most healthy nonpregnant persons either LAIV or TIV may be used, except LAIV should NOT be used for some persons, including those with asthma or any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV please see MMWR 2010;59(No. RR-8).
  - Administer 1 dose to children 9 years and older.

## **2012 Schedule – 7 Through 18 Years Influenza Footnote (footnote 4)**

- **New footnotes:**
  - **For children aged 6 months through 8 years:**
    - 1.) for the 2011-12 season, administer 2 doses(separated by at least 4 weeks) to (a) those who are receiving influenza vaccine for the first time or (b) to those who did not receive at least 1 dose of the 2010-11 vaccine.**
    - 2.) for the 2012-13 season, follow dosing guidelines in the 2012 ACIP Influenza vaccine recommendations.**



# 2012 Schedule – 7 Through 18 Years

## IPV Footnote (footnote 8)

- New bullet added:
  - The final dose in the series should be administered at least 6 months following the previous dose.
  - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
  - **IPV is not routinely recommended for U.S. residents aged 18 years or older.**

# Proposed Changes to the 2012 “Catch-up” Schedule

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this Table in combination with Childhood and Adolescent Immunization Schedules and their footnotes.

PERSONS AGED 4 MONTHS THROUGH 6 YEARS					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the third dose is 24 weeks		
Rotavirus <sup>1</sup>	6 wks	4 weeks	4 weeks <sup>1</sup>		
Diphtheria, Tetanus, Pertussis <sup>2</sup>	6 wks	4 weeks	4 weeks <sup>2</sup>	6 months <sup>2</sup>	6 months <sup>2</sup>
Haemophilus influenzae type b <sup>3</sup>	6 wks	If first dose administered at younger than age 12 months 8 weeks (as final dose) If first dose administered at age 12–14 months No further doses needed If first dose administered at age 15 months or older	If current age is younger than 12 months 8 weeks (as final dose) <sup>3</sup> If current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered at younger than 15 months No further doses needed If previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal <sup>4</sup>	6 wks	If first dose administered at younger than age 12 months 8 weeks (as final dose for healthy children) If first dose administered at age 12 months or older or current age 24 through 59 months No further doses needed for healthy children if first dose administered at age 24 months or older	If current age is younger than 12 months 8 weeks (as final dose for healthy children) If current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated Poliovirus <sup>5</sup>	6 wks	4 weeks	4 weeks	6 months <sup>5</sup> minimum age 4 years for final dose	
Meningococcal <sup>10</sup>	9 mos	8 weeks <sup>10</sup>			
Measles, Mumps, Rubella <sup>6</sup>	12 mos	4 weeks			
Varicella <sup>7</sup>	12 mos	3 months			
Hepatitis A	12 mos	6 months			
PERSONS AGED 7 THROUGH 18 YEARS					
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis <sup>8</sup>	7 yrs <sup>8</sup>	4 weeks	If first dose administered at younger than age 12 months 6 months If first dose administered at 12 months or older	6 months If first dose administered at younger than age 12 months	
Human Papillomavirus <sup>9</sup>	9 yrs		Routine dosing intervals are recommended (females) <sup>9</sup>		
Hepatitis A	12 mos	6 months			
Hepatitis B	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated Poliovirus <sup>5</sup>	6 wks	4 weeks	4 weeks <sup>5</sup>	6 months <sup>5</sup>	
Meningococcal <sup>10</sup>	9 mos	8 weeks <sup>10</sup>			
Measles, Mumps, Rubella <sup>6</sup>	12 mos	4 weeks			
Varicella <sup>7</sup>	12 mos	If person is younger than age 13 years 4 weeks If person is aged 13 years or older			

# Proposed Changes to the 2012 “Catch-up” Schedule

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. **Always use this Table in combination with Childhood and Adolescent Immunization Schedules (Figures 1 and 2) and their respective footnotes.**

# Removal of Hepatitis B footnote

**Catch-up Immunization Schedule for Persons Aged 4 Months Through 18 Years Who Start Late or Who Are More Than 1 Month Behind**  
 The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed or who have not started on time. The schedule should be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age group.  
 Always use this Table in combination with Childhood and Adolescent Immunization Schedules and their footnotes.

PERSONS AGED 4 MONTHS THROUGH 6 YEARS				
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses		
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4
Hepatitis B	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the third dose is 24 weeks	
Rotavirus <sup>1</sup>	6 wks	4 weeks	4 weeks <sup>1</sup>	
Diphtheria, Tetanus, Pertussis <sup>2</sup>	6 wks	4 weeks	4 weeks	6 weeks
		4 weeks If first dose administered at younger than age 12 months	4 weeks <sup>3</sup> If current age is younger than 12 months	8 weeks

**Hepatitis B vaccine (HepB). – No longer a footnote – wording in grid.**

**Hepatitis B vaccine (HepB).**

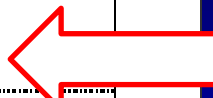
- Administer the 3-dose series to those not previously vaccinated.
- The minimum age for the third dose of HepB is 24 weeks.
- A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.

# 2012 “Catch-up” Schedule

## Hib Footnote (footnote 3)

- Condensed footnotes:
  - ~~1 dose of~~ Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy.
  - If the first 2 doses were ~~PRP-OMP~~ PedvaxHIB or Comvax, and administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.

# 2012 “Catch-up” Schedule IPV Footnote (footnote 5)

		No further doses needed for healthy children if first dose administered at age 24 months or older	No further doses needed for healthy children if previous dose administered at age 24 months or older	12 months or for children at high risk who received 3 doses at any age	
Inactivated Poliovirus <sup>5</sup>	6 wks	4 weeks	4 weeks	6 months <sup>5</sup> minimum age 4 years for final dose	
Meningococcal <sup>10</sup>	9 mos	8 weeks <sup>10</sup>			
Measles, Mumps, Rubella <sup>2</sup>	12 mos	4 weeks			
Varicella <sup>7</sup>	12 mos	3 months			
Hepatitis A	12 mos	6 months			

## 5. Inactivated poliovirus vaccine (IPV).

- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose. Words inserted into the grid instead.
- A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months following the previous dose.
- In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
- IPV is not routinely recommended for U.S. residents aged 18 years or older.

# 2012 “Catch-up” Schedule MCV Footnote (footnote 6)

- **6. Meningococcal conjugate vaccines, quadrivalent (MCV4). Minimum age 9 months for Menactra (MCV4-D); 2 years for Menveo (MCV4-CRM)**
  - Refer to Figure 1. “Recommended Immunization Schedule for Persons Ages 0 through 6 Years” and Figure 2. “Recommended Immunization Schedule for Persons Ages 7 through 18 Years” for further guidance.

- **Removal of HepA footnote –  
Information in Table and 0-6 yr and 7-  
18 yr Schedules.**



# 2012 Schedule – Catch-up Schedule HPV Footnote (footnote 10)

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- Awaiting ACIP vote in Oct 2011 before finalizing these footnotes.

# 2012 Schedule – Catch-up Schedule

## HPV Footnote (footnote 10)

- 10. Human papillomavirus vaccine (HPV).
  - Administer the series to females **and males** at age 13 through 18 years if not previously vaccinated or who have not completed the vaccine series.
  - ~~– Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.~~
  - **Use recommended routine dosing intervals for series catch-up, see Figure 2.** (Recommended Immunization Schedule for Persons 7 through 18 years of Age).
  - ~~– (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.~~

# 2012 Schedule – Catch-up Schedule

## HPV Footnote (footnote 10) – if NO

- 10. Human papillomavirus vaccine (HPV).
  - Administer the series to females at age 13 through 18 years if not previously vaccinated or who have not completed the vaccine series. See Recommended Immunization Schedule for Persons Ages 7 through 18 years for guidance regarding male vaccination.
  - ~~– Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.~~
  - Use recommended routine dosing intervals for series catch-up, see Figure 2.( Recommended Immunization Schedule for Persons 7 through 18 years of Age).
  - ~~– (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.~~

# Discussion

# Vote

# 2012 Immunization Schedules

## Next Steps

- Revisions as necessary
- Submission to *MMWR* for editing during the first week in December
- Submission of edited copy to AAP and AAAP by January 1, 2012
- Publication in *MMWR* on February 10, 2012
- Publication in *Pediatrics* and *American Family Physician* in February 2012

# Thank you

## Harmonized Schedule Subject Matter Experts

- Division of Bacterial Diseases
  - Gina Mootrey (ADS)
  - Tamara Pilishvili
  - Elizabeth Briere
  - Amanda Cohn
  - Jennifer Liang
- Division of Viral Diseases
  - Mona Marin (ADS)
  - Margaret Cortese
  - Greg Wallace
  - Stephanie Bialek
- Influenza Division
  - Jerome Tokars (ADS)
  - Lisa Grohskopf
- Division of Viral Hepatitis, NCHHSTP
  - Deborah Holtzman (ADS)
  - Trudy Murphy
- Division of STD Prevention, NCHHSTP
  - Sevgi Aral (ADS)
  - Fred Bloom (ADS)
  - Lauri Markowitz
- NCIRD OD
  - David Swerdlow (ADS)
- NCIRD, ISD
  - Abigail Shefer (ADS)

# Thank You

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- **NCIRD, EIPB**
  - **Melissa Barnett (Graphics)**